

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): An image forming apparatus supervisory system configured to supervise a plurality of image forming apparatuses disposed at a plurality of user sides, said image forming apparatus supervisory system comprising:

a central supervisory apparatus configured to include a processor and to determine updated hardware in an applicable one or more of the plurality of image forming apparatuses;

a firmware download device provided in the central supervisory apparatus and configured to download prescribed updated firmware to an applicable one or more image forming apparatuses in accordance with the determined updated hardware of the one or more image forming apparatuses; [[and]]

a firmware update device provided in each of the image forming apparatuses and configured to update firmware of the one or more image forming apparatuses with the updated firmware when the updated firmware is downloaded;

a hardware read device in each respective image forming apparatus configured to read hardware information of each respective image forming apparatus;

a hardware information transmission device configured to transmit the hardware information from the each respective image forming apparatus to the central supervisory apparatus;

a database provided in the central supervisory apparatus and configured to store hardware information of the plurality of image forming apparatuses; and

a database update device configured to update the database based upon the hardware information when receiving the hardware information from the one or more image forming apparatuses.

Claim 2 (Original): The image forming apparatus supervisory system according to claim 1, wherein the updated hardware includes a control baseboard or a unit.

Claim 3 (Original): The image forming apparatus supervisory system according to claim 1, wherein the updated hardware includes one or more non-volatile memories configured to store prescribed firmware.

Claim 4 (Canceled).

Claim 5 (Currently Amended): The image forming apparatus supervisory system according to claim [[4]] 1, wherein said hardware information is transmitted when power is supplied to the image forming apparatus.

Claim 6 (Currently Amended): The image forming apparatus supervisory system according to claim [[4]] 1, wherein said hardware information is periodically transmitted at a prescribed interval.

Claim 7 (Currently Amended): The image forming apparatus supervisory system according to claim [[4]] 1, wherein said hardware information is transmitted when prescribed communications are performed between the one or more applicable image forming apparatuses and the central supervisory apparatus.

Claim 8 (Currently Amended): The image forming apparatus supervisory system according to claim [[4]] 1, further comprising:

a hardware read instruction transmission device provided in the central supervisory system and configured to transmit a hardware read instruction to the applicable one or more image forming apparatuses, wherein said hardware information is transmitted when the applicable one or more image forming apparatuses receives the hardware read instruction.

Claim 9 (Currently Amended): The image forming apparatus supervisory system according to claim [[4]] 1, further comprising:

a hardware information storage device provided in the each of the plurality of image forming apparatuses and configured to store its own hardware information; and

a hardware information update device configured to update its own hardware information.

Claim 10 (Original): The image forming apparatus supervisory system according to claim 9, further comprising:

a hardware read device provided in the hardware information update device and configured to read at least a version number of the hardware;

an information comparison device configured to compare the at least a version number with the hardware information stored in the hardware information storage device; and

a determination device configured to determine if the at least a version number conforms to the hardware information, wherein said hardware information update device updates its own hardware information with the at least a version number only when the at least a version number does conform to the hardware information.

Claim 11 (Original): The image forming apparatus supervisory system according to claim 9, wherein said hardware information is updated when power is supplied to the image forming apparatus.

Claim 12 (Original): The image forming apparatus supervisory system according to claim 9, wherein said hardware information is periodically updated at a prescribed interval.

Claim 13 (Original): The image forming apparatus supervisory system according to claim 9, wherein said hardware information is updated when prescribed communications are performed between the one or more applicable image forming apparatuses and the central supervisory apparatus.

Claim 14 (Original): The image forming apparatus supervisory system according to claim 11, further comprising:

a hardware read instruction transmission device provided in the central supervisory system and configured to transmit a hardware read instruction to the applicable one or more image forming apparatuses, wherein said hardware information is read and transmitted to the central supervisory system when the hardware information transmission device of the applicable one or more image forming apparatuses receives the hardware read instruction.

Claim 15 (Original): The image forming apparatus supervisory system according to claim 9, further comprising:

a hardware read instruction transmission device provided in the central supervisory system and configured to transmit a hardware read instruction to the applicable one or more image forming apparatuses, wherein said hardware information is updated when the hardware

information update device receives the hardware read instruction from the central supervisory apparatus, and is then read and transmitted to the central supervisory apparatus by the hardware information transmission device.

Claim 16 (Original): The image forming apparatus supervisory system according to claim 14, further comprising:

a conformity check device provided in the firmware download device configured to check conformity of supervisory information including at least the hardware information with the updated firmware, wherein said updated firmware is downloaded if the supervisory information conforms to the updated firmware.

Claim 17 (Original): The image forming apparatus supervisory system according to claim 16, wherein said updated firmware is regenerated so as to conform to the supervisory information, if the supervisory information does not conform to the updated firmware.

Claim 18 (Currently Amended): A method for remotely supervising a plurality of image forming apparatuses disposed at a plurality of user sides, said method comprising:

providing a central supervisory apparatus configured to include a processor;

providing a communication line configured to connect to the central supervisory apparatus;

providing, at the central supervisory apparatus, a database configured to store and supervise hardware information of the plurality of image forming apparatuses;

transmitting a hardware read instruction from the central supervisory apparatus to an applicable one or more image forming apparatuses;

reading, in the applicable one or more image forming apparatuses, hardware information from hardware of the applicable one or more image forming apparatuses when power is supplied thereto;

comparing the read hardware information with previously stored hardware information stored in a memory;

determining if both of the read and previously stored hardware information conforms with each other;

updating the previously stored hardware information with the read hardware information when both of the read and previously stored hardware information do not conform with each other;

reading the updated hardware information;

transmitting the updated hardware information to the central supervisory apparatus when receiving the hardware read instruction;

updating the database at the central supervisory apparatus when the transmitted updated hardware information is received;

determining if supervisory information stored in the database conforms to prescribed updated firmware corresponding to the updated hardware information; and

downloading the updated firmware to the applicable one or more image forming apparatuses when the supervisory information conforms to the updated firmware.

Claim 19 (Currently Amended): A method for remotely supervising a plurality of image forming apparatuses disposed at a plurality of user sides, said method comprising:

providing a central supervisory apparatus configured to include a processor;

providing a communication line configured to connect to the central supervisory apparatus;

providing, at the central supervisory apparatus, a database configured to store and supervise hardware information of the plurality of image forming apparatuses;

transmitting a hardware read instruction from the central supervisory apparatus to an applicable one or more image forming apparatuses;

periodically reading hardware information, in the applicable one or more image forming apparatuses, from hardware of the applicable one or more image forming apparatuses;

comparing the read hardware information with previously stored hardware information stored in a memory;

determining if both of the read and previously stored hardware information conforms with each other;

updating the previously stored hardware information with the read hardware information when both of the read and previously stored hardware information do not conform with each other;

reading the updated hardware information;

transmitting the updated hardware information to the central supervisory apparatus when receiving the hardware read instruction;

updating the database, at the central supervisory apparatus, when the transmitted updated hardware information is received;

determining if supervisory information stored in the database conforms to prescribed updated firmware corresponding to the updated hardware; and

downloading the updated firmware to the applicable one or more image forming apparatuses when the supervisory information conforms to the updated firmware.

Claim 20 (Currently Amended): A method for remotely supervising a plurality of image forming apparatuses disposed at a plurality of user sides, said method comprising:

providing a central supervisory apparatus configured to include a processor;  
providing a communication line configured to connect to the central supervisory apparatus;

providing a database, at the central supervisory apparatus, configured to store and supervise hardware information of the plurality of image forming apparatuses;

transmitting a hardware read instruction from the central supervisory apparatus to an applicable one or more image forming apparatuses;

reading hardware information, in the applicable one or more image forming apparatuses, from hardware of the applicable one or more image forming apparatuses when prescribed communications are performed between the applicable one or more image forming apparatuses and the central supervisory apparatus;

comparing the read hardware information with previously stored hardware information stored in a memory;

determining if both of the read and previously stored hardware information conform with each other;

updating the previously stored hardware information with the read hardware information when both of the read and previously stored hardware information do not conform with each other;

reading the updated hardware information;

transmitting the updated hardware information to the central supervisory apparatus when receiving the hardware read instruction;

updating the database, at the central supervisory apparatus, when the transmitted updated hardware information is received;



determining if supervisory information stored in the database conforms to prescribed updated firmware corresponding to the updated hardware;

downloading the updated firmware to the applicable one or more image forming apparatuses when the supervisory information stored in the database conforms to the updated firmware.

Claim 21 (Currently Amended): A central supervisory apparatus configured to remotely supervise a plurality of image forming apparatuses, said central supervisory apparatus comprising:

a processor configured to determine updated hardware in an applicable one or more of the plurality of image forming apparatuses based on read hardware information sent from the applicable one or more of the plurality of image forming apparatuses;

a firmware download device configured to download prescribed updated firmware to an applicable one or more image forming apparatuses in accordance with the determined updated hardware of the one or more image forming apparatuses; and

a hardware information reception device configured to receive the hardware information from each of the plurality of image forming apparatuses to the central supervisory apparatus;

a database provided in the central supervisory apparatus and configured to store hardware information of the plurality of image forming apparatuses; and

a database update device configured to update the database based upon the hardware information when receiving the hardware information from the one or more image forming apparatuses.

Claim 22 (Original): The central supervisory apparatus according to claim 21, wherein the updated hardware includes a control baseboard unit.

Claim 23 (Original): The central supervisory apparatus according to claim 21, wherein the updated hardware includes one or more non-volatile memories configured to store prescribed firmware.

Claim 24 (Original): The central supervisory apparatuses according to claim 21, further comprising a firmware update device configured to update firmware of the image forming apparatuses with the updated firmware when the updated firmware is downloaded.

Claim 25 (Canceled).

Claim 26 (Currently Amended): The central supervisory apparatus according to claim [[25]] 21, wherein said hardware information is transmitted ~~therefrom~~ to the central supervisory apparatus when power is supplied thereto.

Claim 27 (Currently Amended): The central supervisory apparatus according to claim [[25]] 21, wherein said hardware information is periodically transmitted therefrom at a prescribed interval.

Claim 28 (Currently Amended): The central supervisory apparatus according to claim [[25]] 21, wherein said hardware information is transmitted therefrom when prescribed communications are performed with the center system.

Claim 29 (Canceled).

Claim 30 (Original): The central supervisory apparatus according to claim 21, further comprising a hardware read instruction transmission device configured to transmit a hardware read instruction to the applicable one or more image forming apparatuses.

Claim 31 (Original): The central supervisory apparatuses according of to claims 30, wherein said hardware information is transmitted therefrom when receiving the hardware read instruction.

Claims 32-33 (Canceled).

Claim 34 (Currently Amended): The central supervisory apparatus according to claim ~~[[33]]~~ 21, wherein the received hardware information includes at least a version number of the hardware, and further comprising:

~~a hardware read device provided in the hardware information update device and configured to read at least a version number of the hardware;~~

an information comparison device configured to compare the at least a version number with the hardware information stored in the hardware information storage device; and

a determination device configured to determine if the at least a version number conforms to the hardware information, wherein said ~~hardware information~~ database update device updates ~~its own~~ the hardware information with the at least a version number only when the at least a version number does conform to the hardware information.

Claims 35-40 (Canceled).

Claim 41 (Currently Amended): The central supervisory apparatus according to claim ~~[[29]]~~ 31, further comprising:

a conformity check device provided in the firmware download device configured to check conformity of supervisory information including at least the hardware information with the updated firmware, wherein said updated firmware is downloaded if the supervisory information conforms to the updated firmware.

Claim 42 (Original): The central supervisory apparatus according to claim 41, wherein said updated firmware is regenerated so as to conform to the supervisory information, if the supervisory information does not conform to the updated firmware.

Claim 43 (Currently Amended): An image forming apparatus supervisory system configured to supervise image forming means disposed at a plurality of user sides for forming an image, said image forming apparatus supervisory system comprising:

central supervisory means for remotely supervising image forming means and for determining updated hardware in an applicable one or more of the plurality of image forming apparatuses;

firmware download means for downloading prescribed updated firmware to an applicable one or more image forming means in accordance with the determined updated hardware of the applicable one or more image forming means, said firmware download means provided in the central supervisory means; ~~[[and]]~~

firmware update means for updating firmware of the one or more image forming means with the updated use firmware when the updated firmware is downloaded, said firmware update means being provided in each of the image forming means;

hardware read means in each respective image forming apparatus for reading hardware information of each of the plurality of image forming apparatuses;

hardware information transmission means for transmitting the hardware information from the each of the plurality of image forming apparatuses to the central supervisory apparatus;

database means provided in the central supervisory means and for storing hardware information of the plurality of image forming apparatuses; and

database update means for updating the database based upon the hardware information when receiving the hardware information from the one or more image forming apparatuses.